L17 ANSWER 1 OF 147 CA COPYRIGHT 2003 ACS
AN 138:165915 CA
TI Analysis method for **lipoproteins** by high-performance liquid chromatography with sulfopropyl-ligand column and magnesium ion-containing eluents
AU Hirowatari, Yuji; Kurosawa, Hideo; Yoshida, Hiroshi; Doumitu, Ken-iti; Tada, Norio
CS TOSOH Corp., Scientific Instruments Division, Kanagawa, 252-1123, Japan
SO Analytical Biochemistry (2002), 308(2), 336-342
CODEN: ANBCA2; ISSN: 0003-2697
PB Elsevier Science
DT Journal
LA English
AB We have developed a new anal. method for **lipoproteins** in serum by high-performance liq. chromatog. using a sulfopropyl-ligand column with eluents contg. magnesium nitrate. The magnesium ion anchors **lipoproteins** to the ligands on the column gel. **Lipoproteins** are eluted from the column with a magnesium nitrate concn. gradient and detected by postcolumn reaction using a reagent contg. cholesterol esterase and cholesterol oxidase. High-d. **lipoprotein**, low-d. **lipoprotein**, and very-low-d. **lipoprotein** were eluted in order from the column. The within-assay and between-assay coeffs. of variation for cholesterol concn. in **lipoproteins** were 1.1-3.7 and 1.3-5.8%, resp. The correlation coeffs. between the values of total cholesterol, high-d. **lipoprotein** cholesterol, and low-d. **lipoprotein** cholesterol obtained by the new method and those obtained by an enzymic method using an automated chem. analyzer were 0.940, 0.979, and 0.909, resp. The new method was successfully applied to the anal. of plasma **lipoproteins** of patients with hyperlipidemia.
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 147 CA COPYRIGHT 2003 ACS
AN 137:106077 CA
TI Method for quantitating cholesterol in **lipoprotein**
IN Tadano, Toshio; Funada, Tadashi
PA NOF Corporation, Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002202314	A2	20020719	JP 2000-400509	20001228
PRAI	JP 2000-400509		20001228		

AB A convenient method is provided for directly quantitating cholesterol in each **lipoprotein** in a sample without performing a fractionation operation to give the measurement values with excellent reliability. The method is excellent in the correlation, esp. to the std. CDC method, and in the simplicity with the compn. system of additive agents, comparing with the conventional techniques. In this method, the quantity of cholesterol in a sample contg. more than one kind **lipoprotein** among chylomicron, high d. **lipoprotein** (HDL), low d. **lipoprotein** (HDL), and very low d. **lipoprotein** (VLDL), is directly and selectively measured using enzymes (e.g, cholesterol esterase and cholesterol oxidase or cholesterol dehydrogenase). The method is characterized by using a phospholipid or a phospholipid-like group-contg. compd. in the assay mixt.

L17 ANSWER 6 OF 147 CA COPYRIGHT 2003 ACS
AN 137:75372 CA

TI A new on-line dual enzymatic method for simultaneous quantification of cholesterol and triglycerides in **lipoproteins** by HPLC
AU Usui, Shinichi; Hara, Yukichi; Hosaki, Seijin; Okazaki, Mitsuyo
CS Department of Biochemistry and Biophysics, Graduate School of Allied Health Sciences, Tokyo Medical and Dental University, Tokyo, 113-8519, Japan
SO Journal of Lipid Research (2002), 43(5), 805-814
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
AB We describe an online dual detection method using HPLC for **lipoprotein** anal. that allows simultaneous detn. of cholesterol and triglyceride profiles from a single injection of sample. Two different gel permeation columns, TSKgel LipopropakXL and Superose 6HR, were applied to the dual detection system, evaluating anal. performance of the proposed method and the columns by analyzing serum samples from human and nonhuman subjects. Both TSK and Superose columns produced good within-day imprecision values less than 4.7% for cholesterol and 4.2% for triglyceride detn. Linear regression anal. showed the results from the Superose column (y) correlated well with those from the TSK column (x): y = 0.969x + 5.44 (r = 0.990) for total cholesterol (mg/dL), y = 1.08x - 11.14 (r = 0.985) for total triglycerides (mg/dL), and y = 1.093x - 0.06 (r = 0.978) for the ratios of triglycerides to cholesterol (mg/mg). Furthermore, the cholesterol and triglyceride profiles elucidated the differences in the resoln. ability of the columns, which have not been apparent from a single lipid profile. We conclude that the dual detection concept with proper choice of column and enzymic reagents specific to the objectives of the particular study can facilitate studies of **lipoprotein** metab.
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 7 OF 147 CA COPYRIGHT 2003 ACS
AN 136:382485 CA
TI Highly sensitive cholesterol assay with enzymatic cycling applied to measurement of remnant **lipoprotein**-cholesterol in serum
AU Kishi, Koji; Ochiai, Koji; Ohta, Yohsuke; Uemura, Yahiro; Kanatani, Kazushi; Nakajima, Katsuyuki; Nakamura, Masakazu
CS International Reagents Corporation, Kobe, 651-2241, Japan
SO Clinical Chemistry (Washington, DC, United States) (2002), 48(5), 737-741
CODEN: CLCHAU; ISSN: 0009-9147
PB American Association for Clinical Chemistry
DT Journal
LA English
AB Background: Remnant **lipoprotein**-cholesterol (RLP-C) concns. in sera of healthy individuals are very low (0.080-0.437 mmol/L), making conventional cholesterol methods poorly suited to this purpose. We have developed a highly sensitive cholesterol assay (CD method) and applied it to the RLP-C assay. Methods: The CD shuttled cholesterol reversibly between reduced and oxidized forms in the presence of thio-NAD and NADH. The prodn. rate of thio-NADH correlated with the cholesterol concn. and was measured by the absorbance at 404/500 nm. This CD method was combined with an immunoaffinity sepn. procedure with specific monoclonal antibodies to apolipoprotein (apo) A1 and apo B-100 and used for RLP-C assay. Results were compared with a RLP-C method that uses cholesterol oxidase, peroxidase, and chromogenic substrate. Results: The CD method could detect 0.10.times.10-3 mmol/L cholesterol and was at least 5 times more sensitive than the conventional enzymic method. Within- and between-day imprecision (as CVs) of the RLP-C assay with the CD method was <4%. Regression anal. of RLP-C assays with the new (y) and conventional (x) cholesterol methods yielded: y = 1.02x - 0.008 mmol/L (Sy/x = 0.0065 mmol/L; r = 0.997; n = 297). Conclusions: Serum RLP-C can be measured by the CD method. The CD method may be useful for other assays that require

sensitive cholesterol measurements in biol. materials.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 8 OF 147 CA COPYRIGHT 2003 ACS
AN 136:366112 CA
TI Method of lipid assay and reagent for use therein
IN Yamamoto, Mitsuaki; Yamamoto, Shoko; Nakamura, Mitsuhiro; Saito, Kazunori
PA Daiichi Pure Chemicals Co., Ltd., Japan
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002040707	A1	20020523	WO 2001-JP9899	20011113
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002012760	A5	20020527	AU 2002-12760	20011113
JP 2002214239	A2	20020731	JP 2001-347394	20011113
PRAI JP 2000-346791	A	20001114		
WO 2001-JP9899	W	20011113		

AB A method of lipid assay characterized by assaying lipids contained in a blood component in the presence of an organosilicone compd. The method can cause special conditions characteristic of direct methods while satisfying requirements such as no influence on precision of assay, no burden on assay app. and easy availability.
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 9 OF 147 CA COPYRIGHT 2003 ACS
AN 136:337340 CA
TI Test piece for assaying high density **lipoprotein** (HDL) cholesterol
IN Tamura, Hiroshi; Nishino, Susumu; Yamaguchi, Takehiro; Hino, Koichi
PA Arkray, Inc., Japan; Daiichi Pure Chemicals Co., Ltd.
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002038800	A1	20020516	WO 2001-JP9712	20011107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2002142799	A2	20020521	JP 2000-340751	20001108
AU 2002012717	A5	20020521	AU 2002-12717	20011107
PRAI JP 2000-340751	A	20001108		

WO 2001-JP9712 W 20011107

AB A test piece with a simple structure is provided for easily assaying high d. **lipoprotein** (HDL) cholesterol with a small quantity of test sample. The test piece comprises a reagent layer formed on a support body. The reagent layer contains a cholesterol-measuring enzyme reagent (e.g., cholesterol esterase/cholesterol oxidase, cholesterol esterase/cholesterol dehydrogenase), a first surfactant (e.g., polyoxyethylenealkylenephenylether, polyoxyethylenealkylenetribenzylphenyl ether) possessing a high ability to solubilize HDL comparing with **lipoproteins** other than HDL, and a second surfactant (e.g., polyoxyethylenealkylether, polyoxyethylenealkylphenylether, polyoxyethylene-polyoxypropylene condensation product, polyoxyethylenealkylether sulfate, alkylbenzenesulfonate) possessing an ability to inhibit the dissoln. of **lipoproteins** other than HDL.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 13 OF 147 CA COPYRIGHT 2003 ACS
AN 136:34270 CA
TI Method for analyzing component (VLDL) in biological sample
IN Kishi, Koji; Kakuyama, Tsutomu; Ochiai, Koji
PA International Reagents Corporation, Japan
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001094619	A1	20011213	WO 2001-JP4721	20010605
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001060714	A5	20011217	AU 2001-60714	20010605
EP 1288306	A1	20030305	EP 2001-934540	20010605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRAI JP 2000-171136 A 20000607
WO 2001-JP4721 W 20010605

AB A method is provided for selectively measuring the components, in particular, cholesterol, in a very low-d. **lipoprotein** (VLDL), one of serum **lipoproteins**. In this assay, an enzyme reaction of **lipoprotein** lipase (LPL) or cholesterol esterase (CE) capable of reacting well with high-d. **lipoprotein** (HDL) and VLDL, is carried out in the presence of at least calixarene or its salt, optionally together with one or more substances selected from albumin and basic amino acids.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 16 OF 147 CA COPYRIGHT 2003 ACS
AN 135:192498 CA
TI Method and reagent for measuring cholesterol in remnant-like **lipoprotein**
IN Miyauchi, Kazuto
PA Kyowa Medex Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001231597	A2	20010828	JP 2000-50902	20000228
US 2001031479	A1	20011018	US 2001-788393	20010221
CA 2337559	AA	20010828	CA 2001-2337559	20010222
EP 1132482	A2	20010912	EP 2001-104481	20010228
EP 1132482	A3	20010926		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI JP 2000-50902 A 20000228

AB A convenient enzymic method is provided for measuring cholesterol in remnant-like **lipoprotein** in a biol. sample with high sensitivity without requiring a sample sepn. operation. In this method, remnant-like **lipoprotein** is detd. by measuring hydrogen peroxide or a reduced-type coenzyme generated upon reacting cholesterol esterase, cholesterol oxidase (or cholesterol dehydrogenase), and a phospholipid-hydrolyzing enzyme (e.g., phospholipase D, phospholipase C, phospholipase A2) with the biol. sample added with a surfactant (e.g., polyoxyalkylene deriv., polyoxyethylene-polyoxypropylene copolymer deriv.). The reagent used in this method is also provided.

L17 ANSWER 17 OF 147 CA COPYRIGHT 2003 ACS
AN 135:177702 CA
TI Serum low-density **lipoprotein** determination reagent
IN Ai, Xuejiao; Zou, Guangmei
PA Wuhan Aikema Biological Technology Co., Ltd., Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1281981	A	20010131	CN 1999-116564	19990726
PRAI CN 1999-116564		19990726		

AB The test reagent consists of reagent I and II. The reagent I is composed of dextran sulfate, .alpha.-sulfonated cyclodextrin, dichlorophenol, MgCl2, N-ethyl-N-(3-methylphenyl)-N'-succinyl ethylene diamide, 2-hydroxy-3-(4-morpholinyl)propanesulfonic acid buffer and water. The reagent II is composed of cholesterol esterase, cholesterol oxidase, peroxidase, 4-aminoantipyrine, polyoxyethylene-polyoxypropylene polyether, 2-hydroxy-3-(4-morpholinyl)propanesulfonic acid buffer, and water.

L17 ANSWER 18 OF 147 CA COPYRIGHT 2003 ACS
AN 135:164445 CA
TI Method for quantitating cholesterol in low density **lipoprotein**
IN Matsui, Hiroshi; Mizuno, Kazushige; Arai, Kazuhiko; Nishimura, Takehiko
PA Denka Seiken K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001224397	A2	20010821	JP 2000-39992	20000217
PRAI JP 2000-39992		20000217		

AB An enzymic method is provided for quantitating cholesterol in low d. **lipoprotein** (LDL) more accurately than the conventional method by avoiding the influence by a high content of triglyceride in a sample. The method comprises a first step for erasing cholesterol in

lipoproteins other than LDL and a second step for quantitating cholesterol remaining in the test sample, and the first step is performed in the presence of albumin.

L17 ANSWER 20 OF 147 CA COPYRIGHT 2003 ACS
AN 135:58151 CA
TI Serum high density **lipoprotein** determination reagent
IN Ai, Xuejiao; Zou, Guangmei
PA Wuhan Aikema Biological Technology Co., Ltd., Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1281982	A	20010131	CN 1999-116565	19990726
PRAI CN 1999-116565		19990726		

AB The test reagent consists of reagent I and II. The reagent I is composed of polyanion, Na cholate, 4-aminoantipyrine, and phosphoric acid buffer. The reagent II is composed of cholesterol oxidase, cholesterol esterase, peroxidase and dichlorophenol.

L17 ANSWER 21 OF 147 CA COPYRIGHT 2003 ACS
AN 134:350257 CA
TI Enzymic method for measuring **lipoprotein** cholesterol
IN Sawayanagi, Toyoharu; Koyama, Tamami; Sato, Hajime
PA Showa Denko K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001124780	A2	20010511	JP 1999-307329	19991028
PRAI JP 1999-307329		19991028		

AB A highly accurate and widely applicable enzymic method is provided for measuring a **lipoprotein** cholesterol (e.g., HDL cholesterol, LDL cholesterol) in a sample contg. **lipoproteins** (e.g., blood serum, plasma) without having an influence by a blood component possessing a surface active function. Furthermore, the method does not generate any factors interfering with an optical measurement. In this method, a **lipoprotein** cholesterol is measured by quantitating a compd. consumed or formed in the enzymic reactions upon reacting enzymes (e.g., cholesterol esterase, cholesterol oxidase, cholesterol dehydrogenase) with a sample contg. **lipoproteins**. The method comprises a first step for selectively reacting with HDL cholesterol or cholesterols other than LDL cholesterol using a particular polymer (mol. wt.: 5,000-500,000 dalton, concn.: 0.001-1%) and a first surfactant (e.g., bile acid deriv., zwitterionic surfactant), and a second step for selectively reacting with LDL cholesterol using a second surfactant (e.g., nonionic surfactant).

L17 ANSWER 22 OF 147 CA COPYRIGHT 2003 ACS
AN 134:277601 CA
TI Method and reagent for selectively quantitating LDL cholesterol
IN Matsumoto, Kosuke; Shimoji, Kazuhiko; Furukawa, Keisuke; Kajiyama, Naoki
PA Kikkoman Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	JP 2001103997	A2	20010417	JP 1999-287993	19991008
PRAI	JP 1999-287993		19991008		

AB A convenient and highly accurate method is provided for quantitating LDL cholesterol without various reagents and additives used for the conventional enzymic method. A cholesterol oxidase from Corynebacterium capable of selectively reacting with free cholesterol in LDL is added to a sample, and hydrogen peroxide is generated from the free cholesterol in LDL. Then, the quantity of hydrogen peroxide generated is measured using peroxidase, 4-aminoantipyrine, and a dye-forming substance. The reagent used for this method is claimed.

L17 ANSWER 23 OF 147 CA COPYRIGHT 2003 ACS
AN 134:97504 CA
TI Method and reagent for measuring **lipoprotein** cholesterol by enzymic analysis in the presence of specific polymer
IN Sato, Hajime; Koyama, Tamami; Sawayanagi, Toyoji
PA Showa Denko K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001017197	A2	20010123	JP 1999-188213	19990701
PRAI	JP 1999-188213		19990701		

AB A convenient method is provided for measuring **lipoprotein** cholesterol in a serum or plasma sample with high accuracy by an enzymic anal. using cholesterol esterase and cholesterol oxidase or cholesterol dehydrogenase. The enzymic reactions of **lipoprotein** cholesterol with these enzymes are carried out at pH 5-9 in the presence of a specific polymer (0.001-1w/v%), and HDL cholesterol and LDL cholesterol are specifically measured by quantitating the compd. consumed or formed by the enzymic reactions. The specific polymer used in this method is selected from a group of copolymers of 1-olefin with 6-23 carbons and maleic acid, acrylic acid, or methacrylic acid, and their acid amides.

L17 ANSWER 24 OF 147 CA COPYRIGHT 2003 ACS
AN 134:68410 CA
TI Apparatus and method for determining substances contained in a body fluid
IN Mitchen, Joel R.; Anaokar, Sunil G.; Pasqua, John J.; Crispino, Michele J.; McCaffery, Terrence M.; Connolly, James; Zeng, Hyeon-Sook Lee
PA Polymer Technology Systems, Inc., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000078998	A1	20001228	WO 2000-US16816	20000616
	W: US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1999-139983P	P	19990618		

AB The invention describes methods for detg. cholesterol in low d. **lipoproteins** (LDL) in a living sample by reacting the sample with a reagent in the presence of an non-ionic surfactant and at least one member selected from the group consisting of cyclodextrin and derivs. thereof using novel techniques. An app. for the optoelec. evaluation of test paper strips for use in the methods for detection of certain analytes in blood or other body fluids is also provided. A reflectance photometer is shown which is used to perform the methods of this invention and

includes various features, including a lot no. reader wherein if the test strip does not match a memory module, a test is not performed, and the user is instructed to insert a correct memory module.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 25 OF 147 CA COPYRIGHT 2003 ACS
AN 134:53505 CA
TI Enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific **lipoprotein**.
IN Nakamura, Mitsuhiro; Taniguchi, Yuriko; Manabe, Mitsuhisa; Yamamoto, Mitsuaki
PA Daiichi Pure Chemicals Co., Ltd., Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000078999	A1	20001228	WO 2000-JP3860	20000614
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000012311	A	20020319	BR 2000-12311	20000614
EP 1197564	A1	20020417	EP 2000-939057	20000614
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001286297	A2	20011016	JP 2000-183053	20000619
PRAI JP 1999-174624	A	19990621		
JP 2000-26737	A	20000203		
WO 2000-JP3860	W	20000614		

AB An enzymic method is provided for pretreating a sample before quantitating cholesterol so that the quantitation of cholesterol present in a specific **lipoprotein** (e.g., HDL) in the sample is accurately and efficiently performed with a simple operation without using a polyanion and so on as a basic procedure. The **lipoprotein**-contg. sample is reacted with an enzyme (e.g., cholesterol oxidase, cholesterol dehydrogenase) for which free cholesterol is a substrate, or according to the necessity, with a reaction-stimulating substance (e.g., flufenamic acid, mefenamic acid, 2,2',6',2''-terpyridine, tiglic acid, fusidic acid, .beta.-methasone acetate, monensin, mevinolin) in addn. to the enzyme. A method and a kit are also disclosed for quantitating cholesterol present in a specific **lipoprotein** using this pretreatment method. This cholesterol-quantitating method is suited for the various automated anal. app. applications.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 27 OF 147 CA COPYRIGHT 2003 ACS
AN 133:360592 CA
TI Method and reagent for measuring **lipoprotein** cholesterol by enzymic analysis
IN Sato, Hajime; Koyama, Tamami; Sawayanagi, Toyoji
PA Showa Denko K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000325097	A2	20001128	JP 1999-142450	19990521
PRAI	JP 1999-142450		19990521		

AB A method and a reagent are provided for conveniently and accurately measuring LDL cholesterol and HDL cholesterol in a sample (e.g., serum, plasma) contg. **lipoproteins** according to the need. The method comprises a process for detg. HDL cholesterol by measuring a substance consumed or a substance formed upon reacting enzymes (cholesterol esterase and cholesterol oxidase) and a first surfactant (e.g., bile acid deriv., zwitterionic surfactant) with HDL cholesterol in a sample contg. **lipoproteins**, and a process for detg. LDL cholesterol by measuring a substance consumed or a substance formed upon reacting enzymes and a second surfactant (e.g, nonionic surfactant with polyoxyethylene chain) with LDL cholesterol. LDL- and HDL-cholesterol values with blood samples obtained by this method exhibited a high correlation with the values obtained by a reaction HPLC method.

L17 ANSWER 28 OF 147 CA COPYRIGHT 2003 ACS
AN 133:346764 CA
TI Method for separating and quantitating **lipoproteins** by HPLC
IN Haginaka, Atsushi; Yamaguchi, Suguru; Adachi, Tadashi
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000319293	A2	20001121	JP 1999-126853	19990507
PRAI	JP 1999-126853		19990507		

AB A method is provided for sepg. and quantitating **lipoproteins** (high d. **lipoprotein** (HDL), low d. **lipoprotein** (LDL), very low d. **lipoprotein** (VLDL), denatured **lipoprotein**) within a short time with a high accuracy by HPLC. A column is packed with an ion-exchanger possessing functional groups (e.g., anion exchange groups) located substantially only on the hydrophilic polymer layer covering the surface of hydrophilic porous particles (e.g., methacrylic acid ester crosslinked copolymer). Each **lipoprotein** is isolated from a sample liq. contg. **lipoproteins** upon applying the sample liq. into the column by a HPLC method and eluting it, and quantitated by a fluorescence detection method after reacting enzymes (cholesterol ester hydrolase, cholesterol oxidase, peroxidase) with the **lipoprotein**
.

L17 ANSWER 29 OF 147 CA COPYRIGHT 2003 ACS
AN 133:263553 CA
TI Enzumic method for selectively quantitating cholesterol
IN Yamamoto, Mitsuaki; Takahashi, Yoko; Taniguchi, Yuriko; Odawara, Shoko; Nakanishi, Kazuo; Nakamura, Mitsuhiro; Hino, Koichi
PA Daiichi Pure Chemicals Co., Ltd., Japan
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000057191	A1	20000928	WO 2000-JP1663	20000317
	W: AU, CA, CN, JP, KR, MX, US				

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
EP 1164376 A1 20011219 EP 2000-909725 20000317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
PRAI JP 1999-80503 A 19990324
WO 2000-JP1663 W 20000317
AB An enzymic method is provided for selectively and efficiently quantitating cholesterol contained in a specific **lipoprotein** fraction to be measured with a small quantity of sample by a simple operation. The cholesterol contained in the specific **lipoprotein** fraction (e.g., HDL) is quantitated in the presence of a compd. having a relatively strong affinity for the other **lipoproteins** (e.g., LDL, VLDL) not to be measured, a surfactant acting relatively strongly on the specific **lipoprotein**, and a cholesterol reagent. The compd. having a relatively strong affinity for the **lipoproteins** not to be measured is selected from a group of saponin (e.g., digitonin, tomatin), polyene antibiotics (nystatin, pimaricin, peptamycin, trichomycin, fungichromin, perimycin, amphotericin, etruscomycin, primycin, candidine), cholesterol deriv., peptide (bacitracin, polymyxin, suzukacillin, gramicidin), lectin (Con A, castor oil plant lectin, peanut lectin) and phospholipid deriv. A quantification reagent used in this method is claimed. An excellent correlation was obsd. between the HDL content in a blood sample measured by this method and one measured by the conventional pptn. method.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 30 OF 147 CA COPYRIGHT 2003 ACS
AN 133:190189 CA
TI Enzymic method for quantitating specific **lipoprotein**
IN Kishi, Koji; Kakuyama, Tsutomu; Ochiai, Koji; Hasegawa, Yuzo
PA International Reagents Corp., Japan
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000052480	A1	20000908	WO 2000-JP1172	20000229
W: CA, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1158299	A1	20011128	EP 2000-905409	20000229
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI JP 1999-53330 A 19990301
WO 2000-JP1172 W 20000229
AB An enzymic method is provided for quantitating a specific component (e.g., HDL (high-d. **lipoprotein**), LDL (low-d. **lipoprotein**), VLDL (very low-d. **lipoprotein**)) in **lipoproteins** contained in a biol. sample by using a commonly employed automated analyzer without performing centrifugation or making the reaction liq. cloudy due to the formation of complexes or aggregates. A control means (e.g, ionic strength, enzyme, surfactant) is introduced into the method so that the enzyme reaction can be carried out exclusively for the target component. For example, HDL was highly specifically quantitated using **lipoprotein** lipase (LPL) and cholesterol esterase (CE) from Chromobacterium viscosum in the presence of 100mM hydrazine and 0.6% Nonion K-230 (nonionic surfactant with HLB 17.3).
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 38 OF 147 CA COPYRIGHT 2003 ACS
AN 132:305464 CA
TI A direct and selective enzymic method for quantitating cholesterol in each **lipoprotein**
IN Shinbo, Takao; Tadano, Toshio
PA T.T.K. Y. K., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000116400	A2	20000425	JP 1998-322772	19981009
PRAI JP 1998-322772		19981009		

AB A method is provided for directly and selectively quantitating cholesterol in each **lipoprotein** (chylomicron, HDL, LDL, or VLDL) in a test sample in the presence of phosphorus compd., surfactant and protein solubilizer without fractionating it even when each **lipoprotein** coexists in the sample. A selectivity is given to the reaction between each **lipoprotein** and an enzyme (e.g., cholesterol esterase, cholesterol oxidase, cholesterol dehydrogenase) by selecting an appropriate kind of phosphorus compd. (e.g., inorg. phosphoric acid, its salt, org. phosphate, org. phosphorus compd.) and the appropriate kind and concn. for surfactant (e.g., polyoxyethylene-polyoxypropylene copolymer, polyoxyethylene polymer, polyoxypropylene polymer) and protein solubilizer (e.g, anionic-, cationic-, nonionic-surfactant). The method is useful in quantitating cholesterol which is important in terms of lipid metab. in the field of clin. diagnosis. A good correlation was obsd. between the amts. of cholesterol in HDL or LDL in a serum sample measured by this method and by the centrifugation method.

L17 ANSWER 39 OF 147 CA COPYRIGHT 2003 ACS
AN 132:276084 CA
TI Measurement of serum low density **lipoprotein**-cholesterol in patients with hypertriglycemia
AU Horiuchi, Yuji; Takanohashi, Koichi; Oikawa, Shinji; Numabe, Atsushi; Hishinuma, Akira; Ieiri, Tamio
CS Department of Clinical Laboratory, Dokkyo, University Hospital, Tochigi, 321-0293, Japan
SO Electrophoresis (2000), 21(2), 293-296
CODEN: ELCTDN; ISSN: 0173-0835
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB Low d. **lipoprotein**-cholesterol (LDL-c) concn. measured by a homogeneous enzymic assay was reported to correlate well with the modified .beta.-quantification assay, esp. in samples with high triglyceride (TG) concn. In this study, we evaluated a homogeneous enzymic assay, Cholestest-LDL assay system, in hypertriglycemic patient samples, and found that 56% (9/16) of serum samples with intermediate TG concns. (2.27-4.52 mmol/L) showed more than 10% discrepancy with concn. by the modified .beta.-quantification assay. Such serum samples originated from patients with hyperglycemia of type II a (three cases), type II b (two cases), type III (one case), and type IV (six cases). Differential staining of cholesterol and triglyceride after agarose gel electrophoresis revealed that these serum samples contained significant amts. of intermediate fractions between pre-.beta.- and .beta.-**lipoproteins**. Since **lipoprotein** (a), which migrates between pre-.beta.- and .beta.-**lipoproteins**, is not correlated with the discrepancy, we believe the intermediate fraction consists of intermediate d. **lipoprotein** (IDL) and a chylomicron remnant. A part of IDL and chylomicron remnant, which contain a significant amt. of triglyceride, might be measured as LDL-c by the homogeneous enzymic assay, but not by

the modified .beta.-quantification assay.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 49 OF 147 CA COPYRIGHT 2003 ACS
AN 131:56137 CA
TI Method and reagent kits for determination of **lipoprotein** cholesterol
IN Kishi, Koji; Kakuyama, Tsutomu; Shirahase, Yasushi; Watadzu, Yoshifumi
PA International Reagents Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11155595	A2	19990615	JP 1997-325023	19971126
PRAI JP 1997-325023		19971126		

AB Cholesterol (I) of a target **lipoprotein** is detd. in biol. samples contg. non-target **lipoproteins** by (1) treating I of non-target **lipoproteins** with cholesterol oxidase, (2) measuring light absorbance, (3) treating I of the target **lipoprotein** with cholesterol dehydrogenase, (4) measuring light absorbance, and (5) detg. the difference between the former absorbance and the latter. The enzyme treatment is carried out in the presence of compds. forming water-sol. complexes with I to prevent formation of aggregates.

L17 ANSWER 72 OF 147 CA COPYRIGHT 2003 ACS
AN 127:356750 CA
TI Reagents for measuring HDL cholesterol
IN Hama, Michio; Kazahaya, Kenji; Tsuchiya, Hozumi; Tanaka, Mitsunao
PA Iatron Laboratories, Inc., Japan; Hama, Michio; Kazahaya, Kenji; Tsuchiya, Hozumi; Tanaka, Mitsunao
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9740376	A1	19971030	WO 1997-JP1383	19970422
W: JP, KR, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI JP 1996-123990		19960422		

AB A method by which high d. **lipoprotein** (HDL) cholesterol can be assayed at high accuracy by a convenient procedure. HDL cholesterol in biol. sample is treated with (1) cholesterol esterase and cholesterol oxidase derived from the pancreas and (2) bile acid or its salt, in the presence of albumin, and then the enzymic reaction products one of which is HDL cholesterol are measured by light absorption at 580 nm wave length in components fractionated by ultracentrifugation and liq. chromatog.

L17 ANSWER 73 OF 147 CA COPYRIGHT 2003 ACS
AN 127:316463 CA
TI Evaluation of reactivity using direct assay methods for high density **lipoprotein** cholesterol
AU Yamauchi, Kazuyoshi; Tozuka, Minoru; Hidaka, Hiroya; Nakabayashi, Tetsuo; Aoki, Yosimasa; Katsuyama, Tsutomu
CS Cent. Clin. Lab., Shinshu Univ., Matsumoto, 390, Japan
SO Rinsho Kagaku (Nippon Rinsho Kagakkai) (1997), 26(3), 150-156
CODEN: RIKAAN; ISSN: 0370-5633
PB Nippon Rinsho Kagakkai
DT Journal

LA Japanese
AB We evaluated the **lipoprotein** specificity of 2 direct methods based on different principles for quantifying high-d. **lipoprotein** cholesterol (HDL-C). Utilizing polyethylene glycol-modified enzymes and sulfated .alpha.-cyclodextrin showed about 6% cross-reactivity for very low-d. **lipoprotein** (vLDL), while utilizing polyanion and dispersive surfactant showed about 5% cross reactivity for low-d. **lipoprotein** (LDL). There was difference in the reactivity for HDL3 among the 2 direct methods and the pptn. method, but both direct methods exhibited a higher cholesterol value for HDL2 than the pptn. method. To investigate the reactivity fo HDL2 in detail, the HDL2 fraction was sepd. into HDL with apo E and HDL without apo E by heparin-sepharose affinity chromatog. The pptn. method measured only HDL without apo E, but HDL-C measured by the 2 direct methods included both of HDL with and without apo E. HDL-C values by the direct method were in agreement with the values of total cholesterol in HDL fractions isolated by ultracentrifugation.

L17 ANSWER 70 OF 147 CA COPYRIGHT 2003 ACS
AN 128:32134 CA
TI Test reagent for detecting cholesterol in blood serum or plasma
IN Fujii, Takayuki; Tsuchiya, Hozumi; Tsubota, Hiroyuki
PA Iatron Laboratories, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09288111	A2	19971104	JP 1996-123901	19960423
PRAI	JP 1996-123901		19960423		

AB The method comprises use of lipase to remove turbid impurities from blood serum or plasma, and use of test reagent comprising polyanion, divalent metal salt, nonionic surfactant, cholesterol esterase, cholesterol oxidase, and cholesterol dehydrogenase for quantitating cholesterol and high d. **lipoprotein** in the lipid fraction of serum or plasma after removing turbid impurities.

L17 ANSWER 67 OF 147 CA COPYRIGHT 2003 ACS
AN 128:138326 CA
TI Reagent for measuring an amount of cholesterol
IN Futatsugi, Masayuki; Tanaka, Ikuko
PA Wako Pure Chemical Industries, Ltd, Japan
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 819765	A2	19980121	EP 1997-112007	19970715
	EP 819765	A3	19981230		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2210783	AA	19980118	CA 1997-2210783	19970717
	US 5879901	A	19990309	US 1997-895879	19970717
	JP 10080300	A2	19980331	JP 1997-210099	19970718
PRAI	JP 1996-207770		19960718		

AB The present invention provides a method for measuring an amt. of LDL-cholesterol in samples specifically and accurately and also a reagent used for the method, and by using the present invention, such effect can be attained that LDL-cholesterol can be measured directly using so far widely used automatic analyzer, which has been impossible in known

measurement methods.

L17 ANSWER 84 OF 147 CA COPYRIGHT 2003 ACS
AN 125:269875 CA
TI Method of quantitating cholesterol in low-density **lipoprotein**
IN Miyauchi, Kazuhito; Miike, Akira
PA Kyowa Medex Co., Ltd., Japan
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9628734	A1	19960919	WO 1996-JP664	19960315
	W: AU, CA, CN, JP, KR, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2190282	AA	19960919	CA 1996-2190282	19960315
	AU 9649553	A1	19961002	AU 1996-49553	19960315
	AU 702443	B2	19990218		
	EP 763741	A1	19970319	EP 1996-906036	19960315
	R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CN 1148430	A	19970423	CN 1996-190186	19960315
	CN 1085840	B	20020529		
	JP 3256241	B2	20020212	JP 1996-527481	19960315
	TW 480338	B	20020321	TW 1996-85111384	19960918
	US 5807696	A	19980915	US 1996-737504	19961113
PRAI	JP 1995-57307	A	19950316		
	WO 1996-JP664	W	19960315		

AB A method of quantitating cholesterol in a low-d. **lipoprotein** (LDL) which comprises eliminating cholesterol in a high-d. **lipoprotein** from am LDL-contg. sample, treating the resulting sample with a cholesterol ester hydrolase and a cholesterol oxidase or oxidoreductase, and quantitating the generated hydrogen peroxide or reduced coenzyme.

L17 ANSWER 85 OF 147 CA COPYRIGHT 2003 ACS
AN 125:216395 CA
TI Method of quantitative analysis of cholesterol
IN Hino, Kouichi; Nakamura, Mitsuhiro; Manabe, Mitsuhisa
PA Daiichi Pure Chemicals Co., Ltd., Japan
SO PCT Int. Appl., 11 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9623902	A1	19960808	WO 1995-JP641	19950403
	W: AU, CA, CN, KR, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 08201393	A2	19960809	JP 1995-13607	19950131
	JP 2799835	B2	19980921		
	CA 2185562	AA	19960808	CA 1995-2185562	19950403
	AU 9520852	A1	19960821	AU 1995-20852	19950403
	AU 696681	B2	19980917		
	EP 753583	A1	19970115	EP 1995-913411	19950403
	EP 753583	B1	20001018		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CN 1145096	A	19970312	CN 1995-192343	19950403
	CN 1072724	B	20011010		
	AT 197070	E	20001115	AT 1995-913411	19950403
	ES 2153030	T3	20010216	ES 1995-913411	19950403

	TW 400385	B	20000801	TW 1995-84103384	19950408
	US 5773304	A	19980630	US 1996-704681	19960919
PRAI	JP 1995-13607	A	19950131		
	WO 1995-JP641	W	19950403		

AB Disclosed is a method of quant. anal. of cholesterol contained in a high-specific-gravity **lipoprotein** by adding to a **lipoprotein**-contg. specimen surfactant and a substance which forms a complex with a **lipoprotein** other than the high-specific-gravity **lipoprotein** and a surfactant, and enzymically detg. the cholesterol content. The complex-forming substance is a polyanion, divalent ion, sol. polymer, or antibody specific to **lipoprotein** other than high-specific-gravity **lipoprotein**. The enzymic anal. uses cholesterol esterase in combination with cholesterol oxidase. The method permits the quant. anal. of cholesterol contained in a high-specific-gravity **lipoprotein** with a simple operation at a high efficiency without the necessity for pre-treatment such as centrifugal sepn. This method is applicable to various automatic analyzers and useful also in the field of clin. examn. In example, the method was used to quantitate cholesterol content in HDL.

L17 ANSWER 86 OF 147 CA COPYRIGHT 2003 ACS
AN 125:137205 CA
TI Enzyme method for quantitating cholesterol in **lipoprotein** fraction
IN Totsu, Yoshifumi; Shirahase, Yasushi; Takahashi, Masamitsu; Kishi, Koji
PA Kokusai Shaku Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08131195	A2	19960528	JP 1994-318835	19941221
PRAI	JP 1994-217716		19940912		

AB The method comprises treatment of serum **lipoprotein** fraction with dextran sulfate, and detn. of cholesterol content with cholesterol dehydrogenase. The method is useful for automating cholesterol anal. and for diagnosis of arteriosclerosis. In example, cholesterol content in HDL was detd. by the disclosed method.

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L2 ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS
AN 134:53505 CA
TI Enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.
IN Nakamura, Mitsuhiro; Taniguchi, Yuriko; Manabe, Mitsuhisa; Yamamoto, Mitsuaki
PA Daiichi Pure Chemicals Co., Ltd., Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000078999	A1	20001228	WO 2000-JP3860	20000614	<--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	BR 2000012311	A	20020319	BR 2000-12311	20000614	<--
	EP 1197564	A1	20020417	EP 2000-939057	20000614	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	JP 2001286297	A2	20011016	JP 2000-183053	20000619	<--
PRAI	JP 1999-174624	A	19990621			
	JP 2000-26737	A	20000203	<--		
	WO 2000-JP3860	W	20000614			

AB An enzymic method is provided for pretreating a sample before quantitating cholesterol so that the quantitation of cholesterol present in a specific lipoprotein (e.g., HDL) in the sample is accurately and efficiently performed with a simple operation without using a polyanion and so on as a basic procedure. The lipoprotein-contg. sample is reacted with an enzyme (e.g., cholesterol oxidase, cholesterol dehydrogenase) for which free cholesterol is a substrate, or according to the necessity, with a reaction-stimulating substance (e.g., flufenamic acid, mefenamic acid, 2,2',6',2''-terpyridine, tiglic acid, fusidic acid, .beta.-methasone acetate, monensin, mevinolin) in addn. to the enzyme. A method and a kit are also disclosed for quantitating cholesterol present in a specific lipoprotein using this pretreatment method. This cholesterol-quantitating method is suited for the various automated anal. app. applications.
IC C12Q001-60; C12Q001-26; C12N009-04
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 7
ST cholesterol lipoprotein sample pretreatment oxidase dehydrogenase
IT Analytical apparatus
(automated; enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)
IT Blood analysis
Chromophores
Sample preparation
Test kits
UV and visible spectroscopy
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)
IT Lipoproteins
RL: AMX (Analytical matrix); BSU (Biological study, unclassified); ANST

(Analytical study); BIOL (Biological study)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT Coenzymes
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); ANST (Analytical study); USES (Uses)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT Enzymes, analysis
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); ANST (Analytical study); USES (Uses)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT Lipoproteins
RL: AMX (Analytical matrix); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(high-d.; enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT Anions
(polyvalent; enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT 57-88-5, Cholesterol, analysis
RL: ANT (Analyte); REM (Removal or disposal); ANST (Analytical study); PROC (Process)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT 9026-00-0, Cholesterol esterase 127544-88-1
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT 53-84-9, NAD 83-07-8, 4-Aminoantipyrine 9003-99-0, Peroxidase 9028-76-6, Cholesterol oxidase 67775-34-2, Cholesterol dehydrogenase
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); ANST (Analytical study); USES (Uses)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

IT 61-68-7, Mefenamic acid 80-59-1, Tiglic acid 530-78-9, Flufenamic acid 987-24-6 1148-79-4, 2,2':6',2''-Terpyridine 6990-06-3, Fusidic acid 17090-79-8, Monensin 75330-75-5, Mevinolin 142174-65-0, Emulgen B 66
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(enzymic method for pretreating sample for cholesterol quantitation, and its application to quantitating cholesterol in specific lipoprotein.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L8 ANSWER 84 OF 88 CA COPYRIGHT 2003 ACS
AN 96:177456 CA
TI Determination of total cholesterol
IN Betz, Joachim
PA Battelle-Institut e. V., Fed. Rep. Ger.
SO Ger. Offen., 10 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3032377	A1	19820401	DE 1980-3032377	19800828
	WO 8200833	A1	19820318	WO 1981-EP139	19810826
	W: JP, US				
	RW: AT, CH, FR, GB, LU, NL, SE				
PRAI	DE 1980-3032377		19800828		

AB A fully enzymic method is described for total cholesterol detn. Cholesterol esters are converted to free cholesterol by cholesterol esterase. The free cholesterol is then detd. by measurement of NAD or NADP redn. by cholesterol dehydrogenase. The source of both enzymes is Streptomyces hydrogenase.

L8 ANSWER 84 OF 88 CA COPYRIGHT 2003 ACS
IC C12Q001-32
CC 9-2 (Biochemical Methods)
ST cholesterol enzymic detn
IT Streptomyces hydrogenans
(cholesterol dehydrogenase and esterase of, in cholesterol detn.)
IT 57-88-5, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, enzymic)
IT 9026-00-0 **67775-34-2**
RL: ANST (Analytical study)
(of Streptomyces hydrogenans, in cholesterol detn.)

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L3 ANSWER 1 OF 1 JAPIO COPYRIGHT 2003 JPO
AN 1999-155595 JAPIO
TI DETERMINATION OF LIPOPROTEIN CHOLESTEROL AND REAGENT KIT
IN KISHI KOJI; SUMIYAMA ISAO; SHIRAHASE YASUSHI; TOTSU YOSHIFUMI
PA INTERNATL REAGENTS CORP
PI **JP 11155595** A 19990615 Heisei
AI JP 1997-325023 (JP09325023 Heisei) 19971126
PRAI JP 1997-325023 19971126
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1999
AB PROBLEM TO BE SOLVED: To provide both a method for determining the cholesterol in a fraction of a lipoprotein such as a high-density lipoprotein(HDL) or a low-density lipoprotein(LDL) in a biologiocal sample without carrying out the separation by centrifuging operating using a general-purpose automatic analyzer and without causing trubidity during the reaction and a reagent kit suitable used for the method.
SOLUTION: Cholesterol in another lipoprotein fraction is reacted with at least a cholesterol oxidase to determine the absorbance. Choelsterol in a specific lipoprotein fraction is then reacted with at least a cholesterol dehydrogenase to determine the absorbance. The cholesterol concentration in the specific lipoprotein fraction is determined from the difference in the absorbance. The operations are especially performed under conditions without causing the turbidity in the reactional liquid. Thereby, the cholesterol in the specific lipoprotein fraction can be determined. Since separating fractionation such as centrifuging fractionation is not required, the operations are simple and problems in determination errors and artificial factors can be reduced. The continuous determination using a general-purpose type automatic analyzer can be performed and the determination of the cholesterol can be multichanneled with other test items to carry out the determination.

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